

Message

Sent: 11/8/2019 12:14:24 AM
To: Jerry Campbell [JCcampbell@ramboll.com]
Subject: RE: QPC for the in vivo sim

There's enough variation there that I would absolutely use the exposure-specific QPC. I'd use exposure-specific BWs too, though those are all the same. Still use 20.2/20.3 g, not 25 g.

The citation for these should be in the spreadsheet.

From: Jerry Campbell <JCcampbell@ramboll.com>
Sent: Thursday, November 07, 2019 3:30 PM
To: Schlosser, Paul <Schlosser.Paul@epa.gov>
Subject: QPC for the in vivo sim

Paul,

I had to retrace my steps on QPC for the in vivo simulation. It looks like I used the control animals from the mouse in vivo study instead of the study average. I guess this is only related to this simulation since any sims you run for metrics will be at the basal rate. I think the study average might be a better option here unless you think we should go with the exposure specific QPCs. My understanding of the QPC:QCC relationship is that they are reasonably stable except under high exertion - exercise conditions. This seems more of a stress related increase rather than lack of O2 delivery so the V/P ratio may be stable. I'll update the text for the source of the simulation specific parameters.

**In vivo mouse study
(Hamner)**

							QPC	
Exposure	Frequency	Tidal Volume	Minute Ventilation	Ventilation	BW	Total Ventilation	(L/hr/BW ^{0.75})	
	(BPM)	(ml)	(ml/min)	(L/hr)	(g)	(L/hr/BW ^{0.75})	(70% of Total Ventilation)	
1F 0 ppm	203.8	0.264	52.2	3.13	21.2	56.4	37.6	
2F 13 ppm	178.7	0.242	44	2.64	20.2	49.3	32.8	
3F 30 ppm	240.8	0.278	65.7	3.94	20.2	73.6	49.0	avg
4F 90 ppm	194.7	0.268	52	3.12	20.3	58.0	38.7	39.5

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